



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,302	07/31/2001	John David Sarlay	IEX 2051000	2503
7590	06/15/2005		EXAMINER	
DAVID H. JUDSON 15455 DALLAS PARKWAY SUITE 600 ADDISON, TX 75001			STIMPAK, JOHNNA	
			ART UNIT	PAPER NUMBER
			3623	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/919,302	SARLAY ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Johnna R. Stimpak	3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 28 March 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 40,41,44-46 and 48-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 40,41,44-46 and 48-52 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)          |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. <u>6/10/05</u> .                                     |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

The following is a final office action upon examination of application number 09/919,302. Claims 1-39, 42, 43 and 47 are cancelled. Claim 51 was added. Claims 40, 41, 44-46, 48-52 are pending and have been examined on the merits discussed below.

### **Response to Arguments**

1. Applicant argues that the Pipkins product does not have the specific functionality required by the pending claims – clauses (b)-(c) in claim 46 and also argues that Pipkins does not teach the forecast of contact load expected to be handled. Examiner notes that clauses (b) and (c) in claim 46 teach forecasting a number of contacts over a time period associated with a service level goal. Pipkins teaches forecasting incoming email load and generating staffing requirements based on service level goals and handling time as well as staff availability, and also given the well known techniques of scheduling manpower to attend to a task within a given time period, the contact load expected in a period is allocated or distributed across a time period depending on worker availability and handling time. This distribution obviously would generate a smaller workload for the first period of the entire time period for which there is an overall expected load. Examiner has formulated new rejections in response to these newly amended claims.

2. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the propagation factors and the specific way in which the contact load is propagated over the time period) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

3. In light of the above response, prior rejections to the claims are upheld and slightly modified in response to the newly amended claims.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 40, 41, 44-46, 48-52** are rejected under 35 U.S.C. 103(a) as being unpatentable by Pipkins' Maxima Advantage incorporating Mustang Reports™, hereinafter referred to as Pipkins. Applicant is reminded that the following rejection is based on the product of Pipkins. The following references discuss the following aspects of the Pipkins email management system:

“Mustang.com and Pipkins Join Forces In eService Workforce Management” – December 23, 1999 from Proquest. Reference paragraphs 1-10.

“Pipkins Teams with Mustang.com to Enable Call Center Agents to Integrate Phone Call and Email Functions” – March 16, 2000 from Proquest. Reference paragraphs 11-19.

As per **claim 40 (amended)**, Pipkins teaches the given function is based on one or more factors selected from a set of factors including: a number of contact center agents expected to be available to service the contacts during the given set of identified number of time periods, an amount of time that a contact center agent may allocate to service contacts, an amount of excess capacity that a contact center agent has available, a backlog goal, an agent average handling

time, and agent schedule adherence (paragraph 7 – balancing the burden of work to be completed with the resources available to complete that work, paragraph 15 – average handling time is used to staff the email responses).

As per **claim 41 (amended)**, Pipkins teaches using the second forecast to generate a staffing requirement for the given future time period (paragraph 2 – forecasting is used to predict e-mail customer representative staffing requirements).

Claim 42 cancelled.

Claim 43 cancelled.

As per **claim 44 (amended)**, Pipkins teaches generating a staffing requirement for the given future time period as a function of the aggregate contact load that has been allocated into that given future time period (paragraph 15 – the system allows for staffing email response handling more efficiently by knowing the number of emails coming in and the average handling time so that the staffing can be optimized to meet service levels).

As per **claim 45 (amended)**, Pipkins teaches generating a staffing requirement for the given future time period as reflected in the second forecast, as a function of the aggregate contact load that has been allocated into that given future time period and an agent average handling time that has been forecast for that given future time period (paragraph 15 – the system allows for staffing email response handling more efficiently by knowing the number of emails coming in and the average handling time so that the staffing can be optimized to meet service levels).

As per **claim 46 (amended)**, Pipkins teaches (a) identifying a given service level goal for a given future time period within the given future time range of the first forecast, the service level goal describing a maximum amount of time that may occur between receipt of a given

contact and handling of the given contact, wherein the given contact comprises a part of the contact load expected to occur during the given future time period (paragraph 1 – service level goals are set and the email customer service workforce is scheduled to meet the goals so that incoming emails are handled by the staff during their shifts); (b) for the given future time period of the first forecast, using the given service level goal identified for that given future time period to identify a number of time periods over which the contact load in that given future time period may be allocated (paragraph 15 – service level goals are used to enable staffing; 2 – forecasting is used to predict e-mail customer representative staffing requirements); and (e) Pipkins inherently teaches the steps being performed on an electronic processor since the Pipkins and Mustang systems are computer based. Pipkins teaches scheduling the workforce based on forecasts of email, but does not explicitly teach (c) for the given future time of the first forecast, applying a given function to the contact load to allocate the contact load for the given future time period over a given set of the identified number of time periods. Since Pipkins teaches forecasting email over time and scheduling workforce to meet the email demands it would have been obvious to use a function to distribute the email over a time span so the workforce could meet the service goals. This would make for a quicker email response system wherein service goals could be met efficiently. Pipkins also does not explicitly teach (d) including the step of repeating steps (a) – (c) on an iterative basis for additional given future time periods within the given future time range to distribute the contact load for each additional given future time period. However, Pipkins teaches an optimization algorithm to forecast and schedule the workforce agents and it is well known to one of ordinary skill in the art that an scheduling optimization algorithm includes many iterations to come up with the optimal solution. The iterations would

make the scheduling process be most efficient. Finally, Pipkins does not explicitly teach aggregating the contact load that has been allocated into that given future time period as a result of applying, on an iterative basis, steps a-c to generate a second forecast, the second forecast being a forecast of contact load expected to be handled in each of the set of future time periods within the given future time range, and wherein the second forecast differs from the first forecast in an amount of contact load in at least one future time period. However, since Pipkins teaches forecasting incoming email load and generating staffing requirements based on service level goals and handling time as well as staff availability, and also given the well known techniques of scheduling manpower to attend to a task within a given time period, it would have been obvious to one of ordinary skill in the art that the contact load expected in a period is allocated or distributed across a time period depending on worker availability and handling time. This distribution obviously would generate a smaller workload for the first period of the entire time period for which there is an overall expected load.

For example, suppose at 9:00 am on Monday it is forecast that there will be 60 incoming emails. It is clear that these emails will be allocated over the work day (by hour, i.e., - this is the time period) depending on workforce availability and handling time (as taught by Pipkins, paragraph 16). Hence depending on worker availability and handling time, possibly only 5 of the 60 emails will be handled. At the second hour, possibly 8 will be handled. Therefore the load expected to be handled in the first hour of the day is 5, which differs significantly from the 60 expected to be received in that time period.

In summary, based on Pipkins, it would have been obvious to one of ordinary skill in the art to utilize factors such as worker availability and average handling time, as well as take into

consideration service level goals to distribute the forecasted email load over a time period such as a workday, in order to efficiently respond to each email received. This efficient method of allocating the emails across the work day, depending on worker availability and average handling time, would ensure overstaffing or understaffing will not occur which will lead to inferior service and customer dissatisfaction.

Claim 47 cancelled.

As per **claim 48**, Pipkins teaches the contacts that are not required to be serviced by contact center agents in real-time include contacts selected from a set of contacts that include: electronic communications and written communications (paragraph 1 teaches contacts to be serviced include electronic mail – which inherently include a written communication and, unlike telephone calls, do not have to be responded to in real-time).

As per **claim 49**, Pipkins teaches wherein the electronic communications include at least one e-mail (paragraph 1 teaches contacts to be serviced include electronic mail – which inherently include a written communication and, unlike telephone calls, do not have to be responded to in real-time).

As per **claim 50**, Pipkins does not explicitly teach the electronic communications include at least one fax. Pipkins does teach scheduling workforce to handle electronic mail responses. It is old and well known to one of ordinary skill in the art that many email systems have faxing capabilities, therefore it would have been obvious to include faxes in the electronic communications to be distributed among the workforce to be sure each gets responded to in the most efficient manner.

As per **claim 51 (amended)**, Pipkins is a software program which inherently teaches the apparatus with code executable on a processor to perform the method of claim 46, therefore the since the references applied to claim 46 teaches a computerized system to perform the method, the same rejection as applied to claim 46 is also applied to claim 51.

As per **claim 52**, Pipkins is a software program which inherently teaches the code executable on a processor to perform the method of claim 45, therefore the since the references applied to claim 45 teach a computerized system to perform the method, the same rejection as applied to claim 45 is also applied to claim 52.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,325,292 – Crockett – tour/schedule generation for a force management system

US 6,466,664 – Zhao – time slot based call pacing method and apparatus

US 6,044,355 – Crockett et al – skills-based scheduling for telephone call centers

US 5,615,121 – Babayev et al – system and method for scheduling service providers to perform customer service requests

US 6,128,646 – Miloslavsky – system for routing electronic mail to best qualified person based on content analysis

US 5,787,000 – Lilly et al – method and apparatus for scheduling work orders in a manufacturing process

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Examiners Note: In response to the proposed amendment submitted June 9, 2005, the proposed amendments do not reflect the potential allowable subject matter discussed, specifically, the exact methods of propagating the contact load over the time period.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnna R. Stimpak whose telephone number is 571-272-6736. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JS  
6/10/05



TARIQ R. HAFIZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600